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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,685	08/30/2001	Terry Loughrin	6039-000293	1262

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EXAMINER

DUNWOODY, AARON M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 12/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,685

Applicant(s)

LOUGHRIN ET AL.

Examiner

Aaron M Dunwoody

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Appeal Brief filed 9/5/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

In view of the appeal brief filed on 7/5/03, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the agricultural machine and agricultural implement must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

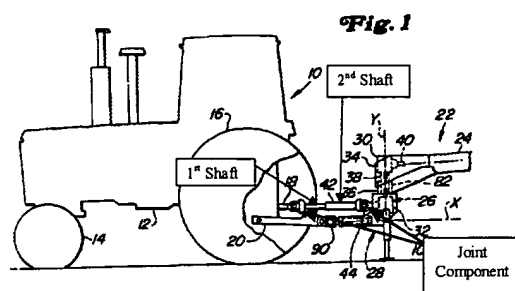
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5706901, Walters et al in view of US patent 6283867, Aota et al.

In regards to claim 1, in Figure 1 below, Walters et al discloses a drive shaft assembly (42) for interconnecting a driving component (10) of an agricultural machine and a driven component (22) of an agricultural implement, comprising a first shaft; a second shaft engaging the first shaft for enabling torque transmission and relative axial sliding motion therebetween; and a joint component of a universal joint operably interconnecting one of the first and second shafts to one of the agricultural driving and driven components, the joint component is both rotatable through a specified range of rotation and is fixed from axial movement relative to one of the second shaft, the agricultural driving component of the agricultural machine and the agricultural driven component of the agricultural implement. Walters et al does not disclose the joint

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component being rotatable through a specified range of free-motion. Aota et al teaches joint component being rotatable through a specified range of free-motion (C_1 , C_2) so that the transmitted torque can be changed in three steps (col. 1 lines 62-67). As Aota et al relates to an elastic shaft joint that connects two coaxial shafts in a state having an elastic play in a rotation direction, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a joint component being rotatable through a specified range of free-motion so that the transmitted torque can be changed in three steps, as taught by Aota et al.



In regards to claim 2, in figures 9-12, Aota et al discloses the joint component including axial grooves and the second shaft includes an end portion having radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 3, in figures 9-12, Aota et al discloses the grooves being formed within a bore of the joint component and the teeth extend outward from the end portion, whereby the end portion is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 4, in figures 9-12, Aota et al discloses the grooves being formed in an outer circumferential surface of the joint component and the teeth extend

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radially inward from the end portion, whereby the joint component is partially received into the end portion for enabling engagement between the teeth and the grooves.

In regards to claim 6, in figures 9-12, Aota et al discloses the joint component including axial grooves and one of the driving and driven components includes radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 7, in figures 9-12, Aota et al discloses the grooves being formed within a bore of the joint component and the teeth extend radially outward from one of the driven and driving components, whereby one of the driven and driving components is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 8, in figures 9-12, Aota et al discloses the grooves being formed along a stub end of the joint component and the teeth extend radially inward within a bore of one of the driven and driving components, whereby the stub end is partially received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 10, in figures 9-12, Aota et al discloses the joint component being a universal joint yoke.

In regards to claim 11, in figures 9-12, Aota et al discloses the second shaft including a stub end interconnected thereto for operably interconnecting the joint component and the second shaft.

Allowable Subject Matter

Claims 5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-4,6-8,10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

However, the Examiner notes that the Applicant defines "free-motion" as:

A drive shaft assembly that includes a range of rotational motion, or 'free-motion' to enable interconnection between the input and output shafts when they are out of exact rotational alignment

It should be noted that this definition does not preclude the existence of an element between the input and output shafts, only a range of rotation, regardless of how large or how small the range may be.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure because it illustrates the inventive concept of the invention.

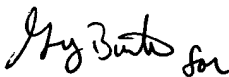
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Dunwoody whose telephone number is (703) 306-3436. The examiner can normally be reached on Monday - Friday between 7:30 am to 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

.amd


Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670